



FROM SYSTEM SHOCK TO SYSTEM CHANGE- TIME TO TRANSFORM

THE FUTURE OF SUSTAINABILITY

**FORUM
FOR THE
FUTURE**



Forum for the Future is a leading international sustainability non-profit with offices in London, New York, Singapore and Mumbai.

We specialise in addressing critical global challenges by catalysing change in key systems. For over 20 years, we've been working in partnership with business, governments and civil society to accelerate the shift toward a sustainable future.

Together we are reinventing the way the world works. Find out more at www.forumforthefuture.org

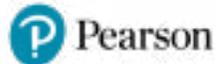
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INTRODUCTION

We live in times of great disruption. Our lives are changing in ways we could not have imagined less than a year ago. And many of the certainties on which we have built our collective response to sustainability challenges, as well as the social and governance structures that underpin the systems we rely on, are being challenged.

Assumptions we made then about the likely trajectories of the coming decade towards sustainability have been thrown up into the air by the impact of COVID-19. And the pieces don't look like falling back into place anytime soon.

COVID-19: Early warning sign of shocks to come

On the surface, this may seem like a bolt from the blue, unrelated to all the other pressing concerns that were focusing our minds – such as the impact of technology and automation on business and jobs, economic models that entrench inequalities, and the growing threats of climate change and ecosystem collapse.

Scratch the surface, though, and it's clear that the pandemic, far from being an outlier, is rather a harbinger of the sort of shocks to the systems we rely on which we can expect in the years to come, as climate change and other disruptions take hold.

Indeed, COVID-19 can in many ways best be seen as an early-warning sign: a symptom, not a cause, of such large-scale disruption. This is in part because it was almost certainly triggered by human encroachment on forests, highlighting once again the intimate relationship between planetary health and human health. But also because it demonstrates how vulnerable our supposedly sophisticated civilisation is to such shocks – and how much needs to change if we are to put it on a genuinely sustainable path.

2020 has exposed the inequality that is deeply embedded in our social and economic structures, from the institutional racism targeted by Black Lives Matter, to the imbalance in global supply chains which has seen millions of factory workers and informal workers in the global South lose their livelihood overnight as lockdowns arrived. The recession catalysed by the impacts of COVID-19 looks set to roll back decades of investment in human capital and poverty reduction.

A decade of transitions

The coming decade will be one of transitions – for good or ill. How we respond to COVID-19 – particularly how governments spend their trillions – will shape our destiny going forward. The 2020s could see us transition into a world of ever more destabilising shocks, or towards a reconfiguration of the systems we rely on based on goals of equity, sustainability and resilience.

In this report, we explore some of the key dynamics that lie at the heart of these transitions. And we ask how we can make active choices now that will transform our future prospects by embedding, at the heart of our strategies and plans, the realisation that a fundamentally different model is needed. A model that puts people's wellbeing and planetary health first, as the overriding imperatives.

Planetary health is not separate to human wellbeing. The two are intricately intertwined. In order to achieve the just, resilient and truly sustainable world we want we advocate a regenerative approach – enhancing the underlying capacity of all individuals, communities and ecosystems, to be healthy, to keep evolving, and fulfilling their potential.

The 2020s could see us transition into a world of ever more destabilising shocks, or towards a reconfiguration of the systems we rely on based on goals of equity, sustainability and resilience.

'Building forward' for a just and regenerative world

This approach is particularly relevant to the 'build back better' response to the economic and social consequences of COVID-19. A just and regenerative approach here is not so much about 'building back' – that implies a return to a modified version of what went before, on a pathway to further depletion, and ever more vulnerable to the next crises. 'Building forward' means fundamental shifts in what we define as important, and in the goals of our systems – away from the current economic model, and towards a distributive one that has the principles of social equity and a just transition to a zero-carbon future at its heart.

Central to these shifts is people working in alignment with living systems themselves and their own powers of regeneration. It is about recognising that the shocks to our systems we are experiencing are not isolated events, but part of a wider systemic breakdown across human society and the wider ecosystem.

It is about seizing the opportunity for effecting real, lasting change at that systemic level, right across the board. Putting that into practice will mean making some radical changes in the way we do business, shape policy, and live our lives.

**That makes it our greatest challenge.
But within it lies our greatest hope.**



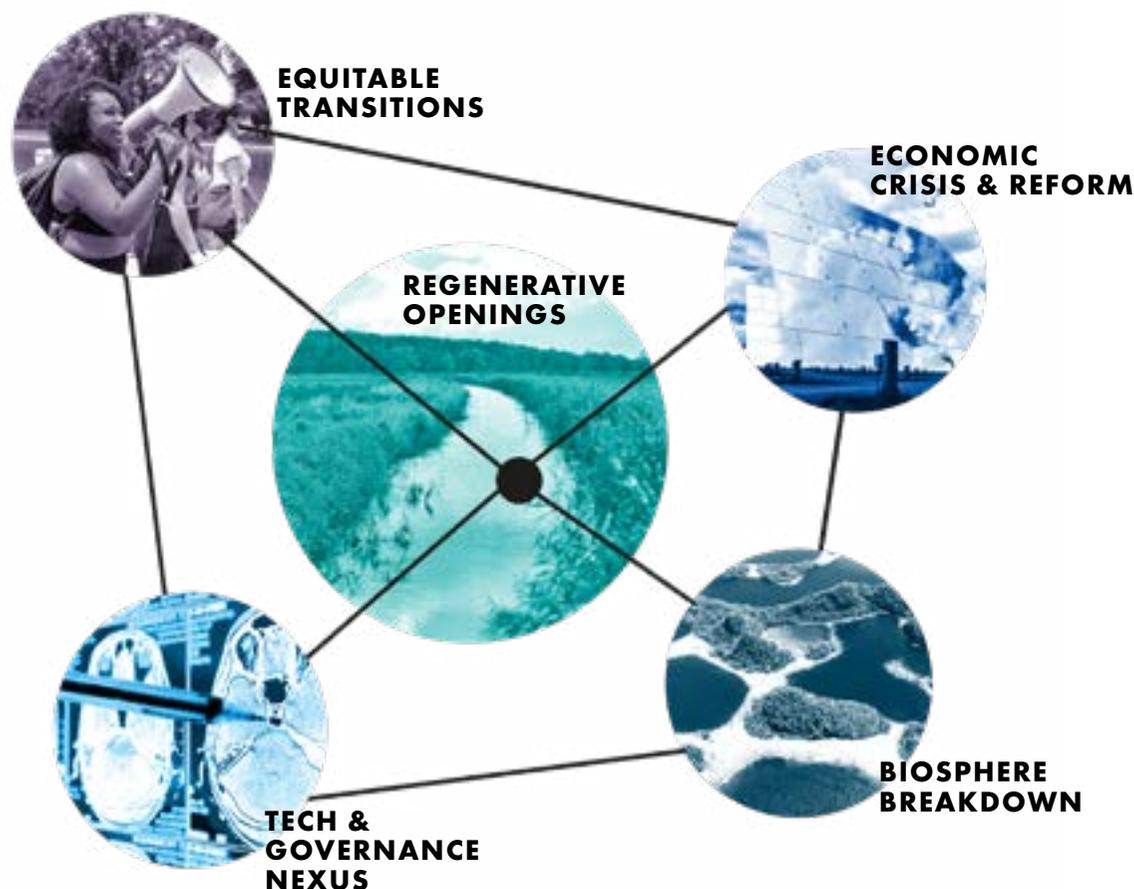
WHAT WE'RE SEEING NOW

KEY DYNAMICS SHAPING THE 2020s

For many years, Forum for the Future has mapped emerging trends across society, the economy and the natural world, and explored what their implications might be for the prospects of a sustainable future.

Trends, of course, do not act in isolation; they interact, and change each other. It is a complex picture, and one which this year we have tried to capture more systemically. Rather than simply tracking individual trends and their interaction, we have instead sought to understand how a whole cluster of trends can combine together to produce a really dramatic impact on the world; one which can shift whole systems.

We refer to these as Dynamics, and we have identified the five in this report as being critical to the transitions under way over the coming decade. They do not, of course, operate in isolation. They themselves are each part of a living, evolving system. For more detail on how we identified these Dynamics, please see [Appendix: Our Approach](#).



WHAT NEXT

EMERGING TRAJECTORIES THAT WILL SHAPE OUR FUTURE

The COVID-19 pandemic has resulted in an extraordinary moment of discontinuity that will profoundly affect how these Dynamics play out over the coming decade.

The degree of systemic change and uncertainty COVID-19 has brought is altering the deepest levels of our assumptions, values and worldviews. From our systems work, we know that the deepest changes come from shifts at these levels, because they allow the shifting of the foundational narratives that we use to make sense of the world, to order our societies, and to organise collective action.

To help navigate this extraordinary time, and to help us understand what this might mean for the Dynamics for the decade ahead, we have identified four broad trajectories emerging out of the COVID-19 discontinuity, characterised by narratives that arise from very different basic sets of assumptions and mindsets:

Compete & Retreat: There is not enough to share – we must retreat to protect our own kind. Our survival and prosperity comes ahead of the survival and prosperity of others.

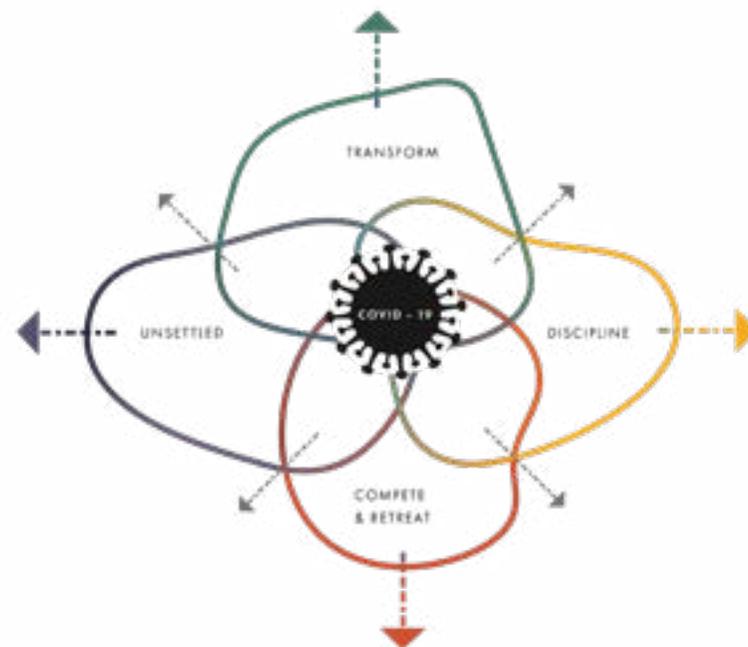
Discipline: Greater control is required – to maintain public health and security and keep growth and global interconnection going as ‘normal’. We are prepared to relinquish privacy concerns for this.

Transform: Planetary health and human wellbeing come first, and are interconnected. Deep change to reset the system is possible, desirable and happening. We can’t go back to ‘before’.

Unsettled: There might not ever be a ‘new normal’. The world is now strange and volatile beyond all previous human experience. Previous ways of thinking are not helpful now.

These trajectories and their underlying mindsets help us to understand what possible futures are open to us and the role we might play in creating them. They are intimately connected to each of the Dynamics, and to the positive and negative trends we will see emerge for the health of our planet, the equitable transitions we are seeking in our societies, and the future of our economy.

As you read this report we invite you to explore your own mindset – is it firmly in one of the trajectories or in all simultaneously? How does that influence your response to the challenges and opportunities we see? And are you ready to play a role in ensuring we can transform?





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01

BIOSPHERE BREAKDOWN

How can we seize the opportunity
to protect the planetary systems
we all depend on?

BIOSPHERE BREAKDOWN

Every living thing on Earth, ourselves included, is dependent on a healthy, functioning biosphere. This is the global ecological system that integrates all life with the natural systems which enable it to thrive – such as the climate, air currents and water cycles. The whole history of human civilisation has been played out within a stable biosphere, which has allowed us to flourish and grow.

Now that benign period is crashing to an end. The planet's living systems are under severe stress from the destruction of biodiversity, the over-exploitation and mismanagement of water resources and the breakdown of the climate. These three, deeply intertwined systems, are in crisis, and as they fall apart, we risk crossing irreversible tipping points to a point of no return. It isn't simply that we can't go back to how things were before: it's that we are set to

enter a radically unstable biosphere, a **'Hothouse Earth'**, unlike anything seen in the past 100,000 years – including the odd ice age.

This isn't happening by accident. It's the result of decades of human decisions, notably by powerful actors in business and government: decisions which reflect and reinforce the structural inequalities that damage the health of people and the planet alike.

We have to act now – within this decade – to reverse this destruction and embark on a massive drive of ecosystem restoration. That means actively engaging with those drivers of destruction, radically changing their direction before it is too late.

We all have a part to play, and there is no time to waste.

TODAY'S PICTURE

We're witnessing those three systemic crises – of biodiversity, water and climate – in everything from weather extremes and wildfires to the spiralling loss of wildlife habitat from human encroachment.

This is a driver for zoonotic pandemics, such as COVID-19 – itself a **stark illustration of the link** between human and planetary health. Meanwhile, the continuing loss and degradation of vast swathes of the world's soils is both accelerating climate change and hampering our ability to feed a growing population.

Tackling these crises piecemeal will only have limited success: they are far too bound up together. The state of the world's forests epitomises the systemic nature of this challenge. Healthy forests are crucial to climate stability, to a well-functioning water cycle and to biodiversity. But the combination of global warming and massive land-use changes is threatening to tip some of the world's remaining great forests – notably the Amazon, but also northern Boreal and Southeast Asian ones – over a particularly dangerous threshold. They are being flipped from carbon sinks, which help to slow climate change, to a huge new emissions source, accelerating warming at an alarming rate.

All scenarios for keeping below a 1.5°C temperature rise depend on halting forest loss in this decade, and making significant progress in reforestation and the restoration of forest ecosystems.

There is no shortage of well-intentioned initiatives – such as **REDD+** and the **Tropical Forest Alliance** – aiming to tackle deforestation. These have made significant progress in some areas, and provide a model for further development, but overall, forest loss is still continuing, and in some cases, accelerating.

Why? Because the systemic drivers of deforestation are still in action: a combination of poor governance, the sidelining of indigenous people and the sheer profitability of forest destruction within the current economic model.

All scenarios for keeping below a 1.5°C temperature rise depend on halting forest loss in this decade.

To read the full signal and our analysis, click through on the links to the newly launched Futures Centre

🚩 SIGNALS OF CHANGE

Divesting from meat

In July 2020, Nordea Asset Management dropped JBS, Brazil's largest meat processor, from its full portfolio (not just ESG-focused funds) – withdrawing around € 40 million – after the company failed to address the investors' concerns regarding its handling of deforestation, among other concerns. Greenpeace claims JBS is among Brazilian meat producers sourcing beef from a protected reserve in the Mato Grosso region.

Amazon logging escalates in lockdown

From January to April 2020, the rate of Amazon deforestation was up **55%** on the previous year, **Reuters reports**. Under President Bolsonaro, the power of the Brazilian Institute of the Environment and Natural Renewable Resources (IBAMA) to combat deforestation has been **severely reduced**, with **21 out of 27 state superintendents** dismissed. Reduced surveillance due to COVID-19 is also **emboldening** illegal loggers, who are creating a gig economy of poorly paid workers ignoring lockdown measures.

Retail supply shifts to protect forests

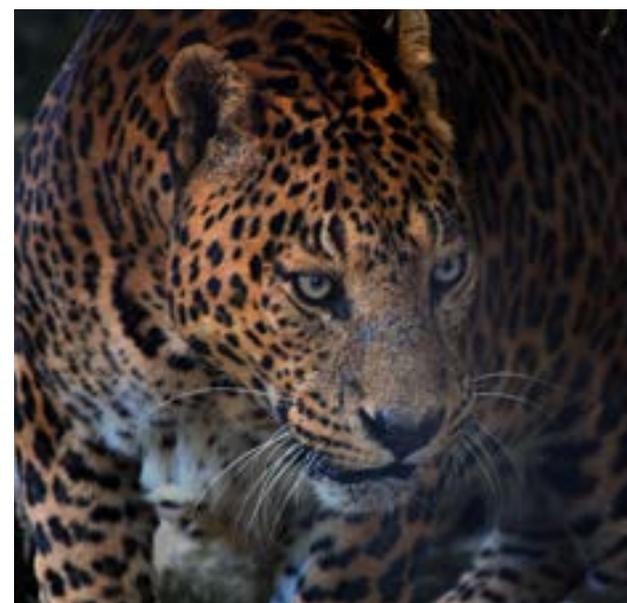
Major fashion retail companies including H&M, Inditex/Zara and M&S are collaborating to develop business solutions that protect frontier forests, including Canada's Boreal, the Amazon and forests in Indonesia, under the CanopyStyle Leaders initiative. Their aim is to shift supply chains away from endangered areas and focus on scaling innovative fibres by recovering textiles from former waste streams.

India coal expansion into ancient forest

Prime Minister Narendra Modi has announced plans to **make India more self-reliant** as part of its post-COVID-19 recovery plans. However, certain aspects of the Atmanibhar Bharat drive raise significant questions over whether it will in fact ensure resilience and recovery for the short or long term. For instance it includes the auction of 40 new coalfields, of which 80% cover land home to ancient forests and indigenous tribes. One targeted area, the **Hasdeo Arand** in Chhattisgarh, is rich in culture and biodiversity, with elephants, leopards and sloth bears as well as being home to tribal communities such as the Gond. Beneath it, lie an estimated 5 billion tonnes of coal. The auction has been opposed by four state governments as well as local communities. One 'block', which coincided with a tiger reserve, has been removed indicating the important role of informed and engaged civil society.

Global corporates call to reverse nature loss

Over 560 companies with a combined revenue of over US\$ 4 trillion are responding to a call from the new Business for Nature coalition to **call for governments** to adopt policies to reverse nature loss this decade. The companies include the tech giant Tencent as well as the major food chain player Walmart, fast fashion brand H&M, agribusiness multinational Olam, and the consumer goods group Unilever.



CASE STUDY

Taking a whole system view of textiles

Most people have never heard of man-made cellulosic fibres, but they are the second largest cellulosic fibre group after cotton and include everyday fibres such as viscose, modal and rayon which are traditionally derived from forest-based feedstocks.

A new vision has recently been laid out for the industry that focuses on how their production can help to build socio-economic resilience and regenerate social and natural systems. This requires moving from an operational perspective to a systems view – for instance using landscape approaches across commodities, making sure a circular economy moves beyond the first loop, and recognising the critical role of enablers such as financial mechanisms that mean primary forest is worth more alive than as a pile of timber.

⚡ IMPLICATIONS

So what – or who – can make a difference?

Research by the **Earth System Finance Project** has shown that a few commercial players have significant exposure to activities driving deforestation, such as cattle ranching, soy and palm oil, pulp and paper, and timber and other extractive industries.

These companies can only thrive with adequate financing – and it is here that rapid and effective leverage for change can be applied. Major financial institutions, such as the ‘Big Three’ investors – BlackRock, Vanguard and State Street – have a major role to play. Some are beginning to make the right noises – **BlackRock’s CEO Larry Fink has called** for a significant reallocation of capital in response to climate risk and is starting to **use its shareholder voting rights** to wield influence. More than 450 investors with over US\$ 35 trillion in assets under management have signed up to the **Climate 100** investor initiative, which aims to ensure the world’s largest corporate greenhouse gas emitters take necessary action on climate change. Other financial giants are exploring ambitious new economic instruments, such as the **Goldman Sachs’ green bond** for forest conservation.

Yet the vast majority of financial institutions remain **heavily exposed** to the sort of activities outlined above, and continue to profit from pushing the biosphere over the tipping point.

Imagine if instead they took a lead in the reallocation of capital away from an extractive model towards a restorative one – supporting regenerative farming,

carbon sequestration or sustainable resource use. What if more investors were to employ risk management systems along the same lines? Then we might reach a different kind of tipping point, with a cascade of positive consequences from restored ecosystems to resilient livelihoods.

Who else can support this agenda, and how?

Corporations can explore the use of nature-based solutions to help overcome infrastructure challenges and meet climate commitments – for example, through investing in mangrove forests for coastal protection rather than expensive built infrastructure. They can also harness fast-developing satellite and other monitoring technology to achieve full traceability and transparency of all forest-based commodities in their supply chains. And they can prioritise circular resource use and regenerative agricultural models.

Beyond such moves, we need to rethink our approach to **forest governance**, so that we don’t over-rely on market-driven models that simply do not match the scale of the task. We need policy makers, investors and business leaders to understand the absolutely critical role of forests in securing a livable climate and a healthy world, and ensure that forest protection is at the heart of risk planning – particularly as they develop their COVID-19 recovery plans.

Next year – 2021 – is the start of the UN Decade on Ecosystem Restoration, and will see the re-negotiation of the Convention on Biological Diversity, the equivalent of the Paris Agreement on climate.

This offers a precious opportunity for all involved – government, business and civil society alike – to create a new, binding Global Green Deal for Nature.

We should all seize it.





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02

ECONOMIC CRISIS & REFORM

**How can we create a resilient
economic system that delivers
social and environmental value?**

ECONOMIC CRISIS & REFORM

The global financial system misallocates resources at extraordinary scale due to an economic model which is focused on short-term profits and growth, and which ignores much social and environmental value.

This systemic misallocation exacerbates inequalities of wealth and power. And it drives investment into activities that overshoot planetary limits, pushing us towards climate and biosphere breakdown.

This is the backdrop against which the response to COVID-19 has played out. To some extent, the unprecedented speed and scale of government action gave heart to those who have been calling on state actors to be far more interventionist when it comes to tackling climate change. When economists **estimated** that meeting the Paris Accord targets would require a US\$ 27 trillion investment in the energy system over the next 30 years, it was widely seen as unfeasible for nations to stump up such a huge sum. Then came COVID-19. In response,

governments around the world have **committed** US\$ 20 trillion in stimulus packages over the next 18 months alone. When the challenge is stark enough, in other words, states can muster up the political will to find the resources to meet it.

The looming climate and biosphere breakdown **is a crisis of much greater magnitude** than COVID-19. The challenge now is for governments and other powerful actors, notably business, to respond with equal urgency. And they must start by ensuring that those stimulus packages for post-COVID-19 recovery help address – rather than exacerbate – that larger crisis.

Their investment decisions will determine whether the recovery lays the foundation for a truly resilient economy – or is simply storing up shocks for the future, the severity of which will make COVID-19 seem like a storm in a teacup.

TODAY'S PICTURE

Comparisons are often made between the COVID-19 recovery plans and those following the financial crash of 2008.

Then, much of the stimulus was **biased towards carbon intensive sectors**. While this had the immediate effect of staving off financial meltdown, it also inflated the 'carbon bubble', thus fuelling climate change. We cannot afford to make this mistake again.

Early signs are mixed, to say the least. Governments are understandably aiming for a 'V-shaped' recovery, one which maximises economic activity while minimising the spread of the disease. However, the natural instinct to return to 'normality' risks delaying the urgently-needed transition to a zero carbon economy. Already, regional Chinese governments have **returned to coal** to help stimulate their economies. Both Brazil and India are looking to cut environmental regulations, while the UK is contemplating granting sweeping approval to housing developers, allowing them to **sidestep biodiversity regulations**.

State responses have also emphasised global inequalities. Wealthy countries have the resources to introduce unprecedented interventions into labour markets, as well as traditional bailout measures. Poorer ones do not, and economists fear a looming sovereign debt crisis as a result. This has led the United Nations Conference on Trade and Development (UNCTAD) and others to **call for a new global settlement** on debt relief and restructuring. But there are also signs of hope.

Political leaders from many different parts of the world are committing to a **'climate-focused' recovery**. The European Commission has launched bold plans for a **'Green New Deal'**. The **Energy Transitions Commission** – whose members include a range of leading businesses from BP to Heathrow Airport to HSBC – have called for "a wave of government stimulus to boost recovery while building a healthier, more resilient, net-zero-emissions global economy". Hawai'i and Canada have put forward feminist post-recovery plans, prioritising women and gender equality as well as reinvesting in indigenous food and ecology practices. Singapore has made **a strong commitment** to advancing sustainability. And the French Government has insisted that it will **only support Air France** if the airline commits to ambitious climate targets.

The natural instinct to return to 'normality' risks delaying the urgently-needed transition to a zero-carbon economy.

To read the full signal and our analysis, click through on the links to the newly launched Futures Centre

SIGNALS OF CHANGE

Hawai'i plans for a feminist economic recovery

Hawaiian counties are committing to a feminist economic recovery plan, alongside a State-led programme to ensure women have equal access to 'green jobs' in sectors targeted for stimulus. The plan proposes an economic reorientation towards "more sustainable economic livelihoods", including investment in childcare, education, healthcare and traditional food practices, and a universal basic income.

Tech company invests in platform for laid-off workers

Edtech unicorn Guild Education has built a platform to help laid-off workers reskill and access new job opportunities, in a deal valued at over US\$80 million. Via the new platform, furloughed workers can take certificates in digital marketing or accounting and connect with hiring partners. The new platform boasts a 96.5% satisfaction rate from workers and success stories in their thousands.

China drops GDP target

In May 2020, China announced it would not be setting a 2020 goal for growth in Gross Domestic Product (GDP) for the first time in decades, due to the great uncertainty posed by COVID-19. Premier Li Keqiang said that the government would instead focus on stabilising employment and increasing living standards. This move is complemented by ongoing research in China into how a Gross Ecosystem Product (GEP) measure can complement GDP.

UNDP calls for temporary basic income

The UN agency estimates it would cost US\$ 199 billion per month to provide a time-bound, guaranteed basic income to the 2.7 billion people living below or just above the poverty line in 132 developing countries. This amounts to just 12% of the total financial response to COVID-19 expected in 2020, or the equivalent of one-third of what developing countries owe in external debt payments in 2020.

FT op-ed calls for creation of new social contract

In April 2020, during the early stages of the UK's lockdown response to the coronavirus pandemic, the Editorial Board of the Financial Times published an op-ed titled "Virus lays bare the frailty of the social contract: Radical reforms are required to forge a society that will work for all". In it, the editors argue for the creation of a new social contract, overturning the dominant political consensus of the last four decades, in order to create the sense of shared endeavour necessary to overcome the virus and its effects.



⚡ IMPLICATIONS

An increased role for the state and greater expectations of public spending seem here to stay for some time. **But we have an opportunity to rethink how this power and this money is used.** What are we stimulating? What do we want to recover? Will it be a return to pre-crisis levels of air traffic, retail consumption, house prices, aggregate demand and GDP growth? Or will we instead be stimulating income security, skills development, natural capital, green infrastructure, renewable energy and clean air?

There is growing evidence that the second approach – widely referred to as ‘build back better’ – can pay much greater dividends for society and investors alike. That was the conclusion of a [study](#) by Oxford University, co-authored by Nick Stern and Joseph Stiglitz. It assessed the relative impact of over 700 government stimulus policies since 2008, and surveyed over 230 experts including finance ministry and central bank officials. It found that investing in infrastructure such as clean energy networks, electric vehicles, broadband connectivity, clean R&D, and worker retraining could offer a far stronger economic recovery, while also helping combat long term climate risks. A similar message came from an [alliance of green investors](#) with trillions of dollars of assets under management

Meanwhile, the crisis has highlighted questions around the fundamental underpinnings of our economic system. The very act of locking down economic activity in the name of public health was an explicit recognition that the economy should serve people, not the other way round.

We are witnessing the value of social safety nets in providing resilience against unforeseen shocks, with public spending seen as an investment rather than a liability. The true worth of many so-called ‘low-skilled’ workers, often the lowest paid, has been brought home with their rebranding as ‘key workers’ on the front lines, ensuring that basic services continue to function.

With employment prospects uncertain, governments could build on this by exploring ambitious alternatives to traditional welfare, such as a universal basic income, or a jobs guarantee. And it is incumbent on them to make sure that the necessarily rapid shift to a zero-carbon economy takes the form of a just transition. That means a transition that does not leave workers in high-carbon sectors high and dry, when the carbon bubble bursts and the scale of its stranded [assets](#) – which could amount to as much as [US\\$ 4 trillion](#) in fossil fuels alone – becomes clear.

Business, too, must play its part. 50 years on from Milton Friedman’s landmark publication on the primacy of shareholders, there is also growing interest in new ways of viewing the role of the corporation. Many progressive businesses are embracing a wider definition of this role, one which encompasses the common good, rather than simply shareholder returns. This is evidenced by the growing strength of the [B Corps movement](#), [Imperative 21](#), other stakeholder capitalism initiatives, and practical corporate responses to COVID-19 putting health or jobs first, such as those highlighted by [Business Fights Poverty](#).

Those companies which have prospered during the crisis, or been kept afloat by government support, now have both the opportunity and responsibility to think hard as to how to embed this values shift in the way they do business.





03

TECH & GOVERNANCE NEXUS

Will technology lock us into an
unsustainable trajectory or enable
a regenerative future?

TECH & GOVERNANCE NEXUS

The digital revolution is transforming our economies and our lives at a vertiginous rate – a trend that has only been intensified by the COVID-19 crisis.

Key features of this digital revolution are the automation and algorithms that are revolutionising how the world works, and how our personal data is held – and profited from. It has massively increased the power and wealth of a few major corporations. **Four of the five most valuable companies** are in the technology sector. In September 2020, Apple alone was worth US\$2.2 trillion – well in excess of the combined value of the entire FTSE100.

As the potential of artificial intelligence (AI) comes to fruition, even more far-reaching changes are underway. AI is transforming industries as varied as finance, retail, healthcare and agriculture, and stripping out the need for human involvement across increasing swathes of the economy, from insurance to transport. It also offers enormous promise for everything from tackling environmental problems to speeding up the adoption of the circular economy, improving healthcare and preventing fraud.

A recent study in [Nature](#) found that, if it was supported by the necessary regulatory oversight, AI could play a key role in achieving the majority of the SDGs. But it also highlighted risks related to high energy consumption, inequitable distribution and application, and transparency with potential to undermine many of the SDGs.

The effective digitalisation of our society brings with it massive potential to drive positive change. But it also brings significant risks as the fast-moving nature of technological development and the use of technology – whether by governments, corporate giants or extremist individuals – outpaces our ability to regulate it, build consensus around ethics and ensure accountability.

This is making questions of private versus commons ownership, authoritarian versus libertarian governance and privacy versus security, ever more urgent.

TODAY'S PICTURE

Globally, the average internet user spends **a quarter of their life online**; more than 6 ½ hours every day. A large proportion of online traffic flows through, or is connected in some way, to relatively few platforms such as **Facebook, Amazon and Google**, and in China, Baidu and Weibo. Much of the resulting personal data is held by private companies and governments and either monetised or used socio-politically in some manner.

If information is the new oil – it underpins the entire global economy.

While it is now more accessible and decentralised, the potential for misuse of information and information media has already led to multiple problems. Politically we have seen **Cambridge Analytica misusing information** during American elections, Russian interference in Western politics or extremist content on YouTube.

Social media allows individuals an unprecedented ability to make their voices heard, and activists to organise. The freedom for anyone, anywhere, to publish online at nearly zero cost and without accountability has brought questions of authentication, fake news, free speech, and even the nature of reality. Empowering for many, it also has its downsides, with billions of users sharing ideas not based on evidence, but **'clickability'**. This has real world consequences; people have died as a result of inflammatory fake news shared on social media, as with the lynchings in India provoked by the rapid spread of **unfounded rumours on WhatsApp**.

The digital revolution, and in particular the development of AI, also have huge potential benefits in tackling our environmental and social challenges. Big data is already being used to **monitor illegal deforestation**, remote sensing technology is helping the Food and Agriculture Organisation (FAO) to **understand how much food can be produced per unit of water**, and AI is driving significant improvements in public health.

But at the same time, access to the benefits of the digital world, while becoming ever more widespread, remains unequal, with the poor, the geographically remote and the elderly being wholly or partially excluded.

The digital revolution and the development of AI have huge potential benefits in tackling environmental and social challenges.

To read the full signal and our analysis, click through on the links to the newly launched Futures Centre

SIGNALS OF CHANGE

[Digital democracy for COVID-19 defense](#)

Taiwan's '**open source, open government**' movement has been key to the country's success in containing COVID-19. Taiwan was one of the first countries to detect the spread of COVID-19 in Wuhan, when a post on a public bulletin board was heavily upvoted. Civic tech coders and activists then used live maps and distributed ledger technology to identify and distribute masks. Digital Minister Audrey Tang calls the bottom-up process 'reverse procurement'.

[Facebook shares partial evidence of crimes against Rohingya](#)

Facebook has recently shared partial information with the Independent Investigative Mechanism on Myanmar (IIMM) regarding content it removed in 2018 and withheld for over a year, after the UN body accused it of withholding evidence of serious hate crimes against the Rohingya. Facebook told Reuters it had removed 18 accounts and 52 pages associated with the Myanmar military to stop hate speech, but has not commented on the content.

[Biometric surveillance grows through COVID-19](#)

The global pandemic has enabled an exponential increase in biometric surveillance applications in the interest of public security, with biometric border controls introduced in Thailand and emergency measures for mass location tracking of citizens in Israel. Chinese AI giant **SenseTime** has experienced rapid growth through COVID-related applications.

[Video gaming companies nudge environmental action](#)

11 video gaming companies have committed to integrate environmental messages into the design of popular games, following a **design jam**. **The Green Mobile Game Jam** challenged companies such as Space Ape, Playdemic, MAG Interactive, Sybo and WildWorks to explore how their games might address themes ranging from climate change to reforestation to renewable energy.

[Farmers and fishermen go digital during the pandemic](#)

Fishermen and farmers around the world have been turning to e-commerce partnerships with a local focus to overcome barriers to selling and buying fresh fruits, vegetables and fish related to the COVID-19 lockdown restrictions. Governments (e.g. Canada, Thailand), farming cooperatives, e-commerce platforms and giants such as Alibaba have been helping to enable the transition which has met fertile ground with customers looking for greater insights into where their food comes from.

If we are to shift to a regenerative economy, one which promotes human connection, empowerment and wellbeing within a sustainable biosphere, then the tech sector has a pivotal role to play.



⚡ IMPLICATIONS

As AI becomes ever more embedded in the mainstream, so will all these trends intensify.

This has been highlighted by the COVID-19 crisis, with technology playing a critical role in managing our response. Millions of people around the world have been regularly tuning in to Johns Hopkins University's COVID-19 Dashboard to understand the progress of the virus. Innovative technologies are being applied to contact tracing and testing by governments with the support of tech giants such as Apple and Alphabet, while others like China, India and Singapore have applied state-controlled technology to tackle the pandemic.

Apparently benign and popularly accepted uses such as these do, however, have the potential to morph into more coercive control methods, such as the Chinese Government's ever more pervasive surveillance and social credit system, **whereby individuals' behaviour and trustworthiness is increasingly monitored and sanctioned.**

And on the work front, where initially automation displaced mainly unskilled labour (in factories, production plants, distribution and retail), the next wave of automation is expected to transform so-called white collar roles such as accountancy and law, which substantially involve analysis of information. Few sectors will be left untouched, including IT professionals themselves.

A 'just transition' will require significant reskilling of the workforce, as well as rethinking work, leisure, wages, and tax.

Some governments are responding faster than others, upskilling regulators and educating the public for this new mode of interacting. Finland and Ukraine are investing in **digital literacy** and **critical approaches to online media** in order to combat fake news and reduce digital inequality, and **Singapore has also banned the publication of fake news.** The European Union's **digital privacy and ethics standard legislation** has now been adopted widely elsewhere.

The tech giants, too, are anticipating greater scrutiny and regulation, and beginning to invest in platforms designed to ensure their growing power can benefit all, such as the **AI and Shared Prosperity Initiative.**

Transparency is a key focus area for groups like this: companies profiting from data are under pressure to share more of it for the public good – and to make the workings of the algorithms which harness it as open as possible. Initiatives such as the **Open Mobility Foundation** and the **LF Climate Foundation** could serve as models here.

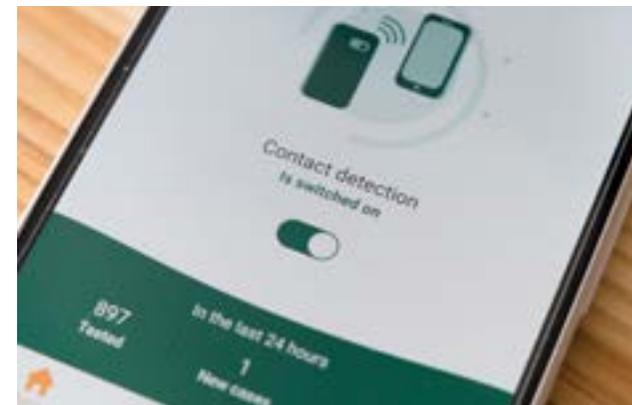
These steps are all essential, but they are only a small part of the whole picture.

If we are to shift to a regenerative economy, one which promotes human connection, empowerment and wellbeing within a sustainable biosphere, then the tech sector has a pivotal role to play.

At a recent Forum for the Future workshop, representatives from the tech sector and beyond agreed that regenerative and socially equitable technology must be rooted within ecological realities, placing human-centred decision making at its core, and enabling a just transition to a net positive future.

The technology sector is the 'invisible architecture' underpinning many of the key dynamics in society today. It has the potential to either lock us into our current, fatally unsustainable trajectory, or to provide the enabling context for rapid transformation to a regenerative world.

The key question we face now is how can we put in place the structures and regulatory mechanisms that ensure we can harness the power of technology to transform our world for the better?





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04

EQUITABLE TRANSITIONS

How can we ensure a just
transition to the future we want?

EQUITABLE TRANSITIONS

82% of the wealth generated globally in 2017 went to the richest 1%, while half the population still live on less than US\$5.50 per day.

Across much of the world, the gap between rich and poor is widening. Given historic growth rates, it would take 100 years and a 15-fold increase in global GDP to lift everyone above the World Bank's poverty line (which itself has been criticised as too low).

The dominant economic models – notably the growing financialisation of the economy – are exacerbating inequality. Asset owners, and those who are already wealthy, are enjoying a rate of return on capital that is substantially higher than economic growth. The rich are getting richer: a process that has been intensified by measures such as the quantitative easing introduced following the financial crash of 2008. Such asset owners are, for the most part, in the older age brackets, resulting in growing intergenerational inequality – as exemplified by the so-called 'Generation Rent' in the UK. A society in which an older generation enjoys riches unlikely ever to be available to the bulk of those who are presently young, is not a recipe for social harmony.

The conventional response has been to argue that economic growth will gradually erase poverty and create a more equal society; that a 'rising tide will float all boats'. But this is looking increasingly unlikely in the face of rising inequalities across generational, racial and class lines.

This is compounded by the climate crisis, which is having a disproportionate impact on the poor. The UN has warned that it threatens to undo much of the progress made in development over the last 50 years, and create a new era of 'climate apartheid', where the rich alone are able to buy their way out of heat and hunger.

Relying on conventional growth models to meet some of the targets enshrined in the UN's Sustainable Development Goals (SDGs) is storing up more problems, as they could well help speed us past the Paris Agreement's threshold of limiting global temperature rise to 2°C.

Delivering on some of the SDGs via our dominant growth model could destroy our chances of meeting others.

TODAY'S PICTURE

Existing inequalities have been sharpened by the impact of COVID-19.

In the rich world, many of those hit hardest by the pandemic have been among the poorest in their societies, such as low-paid care and health workers, often from a BME background, who have been disproportionately exposed to the virus. The economic impact has also been heaviest on the poor in the developing world, with workers in the informal sector and migrant labourers among the first to suffer the impact. It has also increased gender inequality, as low-paid, young, working-class women are among those most affected, and women across developed and developing countries have often taken on the burden of increased domestic care responsibilities.

All this gives the lie to the claim that, facing the pandemic, we are all in it together. As UN Secretary-General António Guterres puts it: "While we are all floating on the same sea, it's clear that some are in superyachts, while others are clinging to the drifting debris."

The fact that the pandemic coincided with the renewed vigour of the Black Lives Matter movement, initially in the US and then Europe, has helped foreground historical legacies, such as colonialism and slavery, that have helped shape present inequalities.

To some extent, COVID-19 has had the effect of highlighting some of these social and economic injustices and has triggered at least some

response from governments and business. For example, governments from Indonesia to India are embarking on programmes of slum upgrading, while cities such as London and Paris are moving to reclaim the streets for cycling and pedestrian use. In India, billionaire businessman Azim Premji's foundation has come together with Wipro to commit nearly US\$ 150 million towards a nationwide response to COVID-19, with a particular focus on strengthening the healthcare system and livelihoods. Elsewhere, a wide range of companies have responded in ways as varied as making large-scale donations in cash or kind, shifting their production to health care needs, and supporting key workers or small businesses.

Now, as plans evolve for a post-COVID-19 recovery, we need to ensure that relief and stimulus packages address the roots of both social inequality and the ecological crisis – otherwise these risk compounding both.

"While we are all floating on the same sea, it's clear that some are in superyachts, while others are clinging to the drifting debris."

- António Guterres
UN Secretary-General



To read the full signal and our analysis, click through on the links to the newly launched Futures Centre

🚩 SIGNALS OF CHANGE

Shareholders prioritise human rights

In 2020, shareholders for the first time prioritised human rights and workers' rights above climate change and other investor concerns, such as lobbying and corporate governance. Members of the Interfaith Centre on Corporate Responsibility and Investor Alliance filed 254 resolutions, of which 52 related to human rights and worker rights, surpassing 45 for climate change. Diversity and inclusiveness also saw 42 resolutions.

Rio Tinto CEO quits over aboriginal site destruction

The Chief Executive of Rio Tinto, the world's second largest metals and mining corporation, has quit over the destruction of a sacred aboriginal site in Western Australia. **Investors expressed shock** and demanded answers after the iron ore miner detonated explosives at rock caves in Juukan Gorge that showed continual evidence of human occupation for 46,000 years.

Citizen assemblies shape recovery

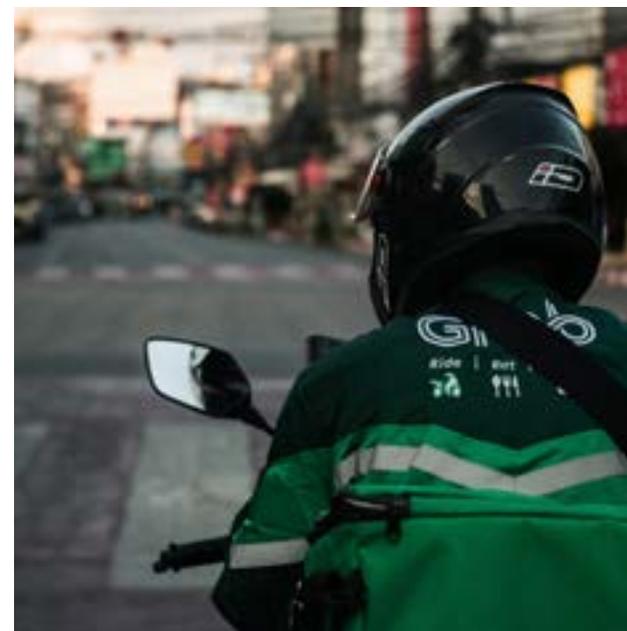
Citizen assemblies in France and the UK are meeting online to shape public policies for the recovery, in response to social distancing measures. In France, 150 members met online in April 2020, putting forward 50 propositions, and calling for "socially acceptable" recovery measures and a "more human and more resilient" economic model. The UK's 108-member Citizens Climate Assembly also met online in April and May and has just produced a report calling for the UK path to net-zero to be underpinned by education, choice, fairness and political consensus.

State vs tech giants in battle over gig worker rights

Uber, Lyft and other gig economy giants have launched Proposition 22, a campaign to enable workers to "choose to work as independent contractors with control over where, when, how long and for who they work", rather than be reclassified as employees with rights. Proposition 22 does offer some protections, including guaranteed minimum earnings, expenses compensation, and health allowances. This is in response to California's Amendment Bill 5, a Supreme Court ruling that workers for gig companies are entitled to employee benefits.

Advertisers boycott Facebook over hate speech

In July 2020, over 1100 companies stopped advertising on Facebook in response to the civil rights campaign Stop Hate for Profit, which called on the social media giant to take more action to stop hate speech on its platforms. The campaign grew among US civil rights groups following the death of George Floyd in police custody. Earlier signatories included The North Face, REI, Ben & Jerry's and Patagonia, followed by Ford, Levi Strauss and Walgreens.



⚡ IMPLICATIONS

The need to ramp up our focus on addressing inequality will only increase in the coming decade with the pandemic likely to be the first of many waves of disruption that will increase risks for already vulnerable communities, just as the impacts of climate change are becoming more apparent.

We may not be able to predict exactly how and when these systemic shocks will hit, but we can act swiftly now to mitigate their impact. Among the most urgent tasks is the need to effect a 'just transition' away from a high-carbon, fossil-fuelled economy to a circular one powered by renewables. This means, for example, ensuring that coal-mining communities are not left behind in a race to decarbonise. It means addressing the multiple social and ecological issues involved in **extracting and processing all the raw materials**, such as coltan and tantalum, needed for a renewably-powered, digital future. But it isn't simply about energy and jobs; a just transition means tackling, rather than compounding, injustice and inequality. If not, it will be both a moral and a practical failure.

Key to all this is decentralising power, enabling wider participation and thus deepening democracy. Active public participation makes for durable policy, as borne out by **research from the Stockholm Environment Institute** which found that involving people early in the policy design process greatly improves the chances that new behaviours 'stick'. Responses to COVID-19 at the local level would seem to bear this out. Even before a national strategy on the pandemic could be put in place, many local authorities took action, with some of the most effective responses coming from informal citizens'

groups. These helped ensure that timely health care information and support reached people in congested urban settlements, such as in **Brazil's favelas** or by the 'Covid yoddhas (warriors)' in **Mumbai's Dharavi slum**.

This coming decade will also see an important demographic transition.

By 2025, 75% of the working population globally will be millennials and members of their successor generation, the so-called Gen Z. Many have already been radicalised by the combined pressures of economic downturns, job insecurity, social injustice and the threat of climate change. They have been poorly served by the present system, and feel they have little to lose from quite radical changes in direction. These are also the people who will still be alive towards the end of the century, living with the long-term consequences of our collective actions. Many are asking fundamental questions about the wisdom of discounting future generations for short-term gains. This has created fertile ground for a significant values shift, away from the current economic model, and towards a distributive one that has the principles of social equity and a 'just transition' to a zero-carbon future at its heart.

As the millennials emerge into leadership positions over this coming decade, they will have both the opportunity and the responsibility to take on this challenge. Meanwhile, it is incumbent on those who currently hold power and influence to start thinking intergenerationally, and bringing young people into the decision-making that will affect their future. To be 'good ancestors' to those who come after.

The pandemic has simultaneously shown up both the systemic inequalities in our society, and how acutely vulnerable our economic model is when faced with a destabilising shock. Inequality is at the heart of both.

So the question now is: are we on the verge of a breaking point – or can we use this shock as a tipping point for change?





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05

REGENERATIVE OPENINGS

**Are regenerative approaches
the critical unlock to the challenges
of the decade ahead?**

REGENERATIVE OPENINGS

We live in extraordinary times, when the interlocking crises facing humanity can seem overwhelming in their complexity and impact. Yet there is hope emerging from people and organisations that are embracing and experimenting with 'regenerative' approaches – challenging us to work with, rather than against, the power of living systems.

This is not a new revelation: replenishing and fostering healthy living systems is a concept which has been at the heart of much ecological thinking for the past half-century – and has arguably been part of some indigenous cultures from thousands of years past. But as the systemic nature of the crises facing us becomes clear, the need to embrace and implement that approach has taken on a new urgency.

And it is one which demands a decisive shift away from some of the mindsets which have dominated our thinking in the past, and which continue to hold a powerful influence today. In cultures heavily influenced by European Enlightenment – which comprise the vast majority of organisations with power and influence today – there is a powerful tendency to think and behave as though we are separate from 'nature'. Everything from our

economic models to our way of measuring 'natural capital' is built on the legacy of a mechanistic worldview. This flies in the face of how we now understand the world. In truth, individuals, human society and the natural world are inextricably intertwined, interacting and influencing each other in a myriad of complex ways.

Our own bodies are ecosystems in miniature, while human societies at scale are part of living systems too. We have co-evolved with our surroundings, such that every place on Earth has been shaped by human existence, and vice-versa. Now, in an increasingly interconnected world, these interdependencies are becoming ever more apparent. COVID-19 is the latest crisis to throw these into sharp relief.

That means that our response to such crises has to have interdependence at its heart. In the face of this realisation, a constellation of approaches, known loosely as 'regenerative', are emerging which have the potential to embrace this living complexity and so unlock transformational change. **It draws on the innate capacity of humans, along with all living things, to recover and restore themselves.**

TODAY'S PICTURE

In sustainability circles, the term 'regenerative' has gone viral over the last two years, applied to everything from farming and economics, to leadership and organisational culture.

With support from pioneering organisations like the Regenes Group, Future Stewards and the Presencing Institute, there's growing excitement around its potential. Take the rise of regenerative agriculture. What has up until now been practiced on a small scale by indigenous communities and permaculture practitioners – for example the food forest at the [Sahainan Organic Permaculture Farm in Thailand](#) – is now inspiring a broader movement to replenish soil health and harness the power of natural processes on any given farm. Companies like [General Mills](#) and [Walmart](#), and initiatives like [Zero Budget Natural Farming](#) in India, have committed to enabling regenerative agriculture at scale.

Increasingly, such initiatives are about more than just the health of the soil and the farm ecosystem, extending to the wellbeing of the farmers themselves, and the surrounding community – both human and natural – such as [Olam's commitment](#) to ecosystem regeneration through its Living Landscapes Policy. We are seeing the likes of [Patagonia](#) take a whole-system approach with organic cotton growers in India, and [Danone](#) supporting farmers with long-term contracts and capacity-building as well as enhancing the local ecosystem. Other examples include [commitments from the cocoa industry](#) to work towards a living income that distributes more of the product value back to producer communities, and so enhances their ability to be a thriving part of the supply chain.

Because the regenerative concept has been so closely associated with agriculture, it can be seen as a purely environmental approach – one which excludes people, or even sees them as an obstacle to 'ecosystem restoration'. This risks it merely playing into existing power dynamics. A similar caveat applies to renewable power generation. While welcome in itself, it will hardly be regenerative in the wider sense of the word if it essentially extracts the energy generated over an area of land and transports it and most of its economic value elsewhere, while the local community gets no benefit – apart from, perhaps, a few poorly-paid jobs.

So regenerative farming or energy can only be a starting point.

Encouragingly, there are signs that some are recognising this. Inspired by its potential, General Mills has embarked on a process to understand how regenerative thinking could be applied within the business more widely. Patagonia is using it as a [framework for how it supports and enables](#) its employees. Meanwhile, civil society organisations like Extinction Rebellion are embedding the concept of 'regenerative cultures' – embracing the diversity of human experience, rooting approaches in the unique local context, and building the capacity of people and communities to continually act, reflect and adapt.



To read the full signal and our analysis, click through on the links to the newly launched Futures Centre

🚩 SIGNALS OF CHANGE

Extinction Rebellion (XR) goes regenerative

The global movement XR seeks to bring a new approach to climate activism, calling on participants to demonstrate the change they want to see in society, and making regenerative culture its organising principle. XR aims to nurture a new culture which is robust and resilient to support us all through the inevitable changes we are facing. By way of definition, XR has put forward a set of 'caring' principles, comprising care for self, for others, for the wider community, and for the planet. According to **one of XR's Elders**, "For every citizen willing to risk arrest we need 20 working in regenerative care".

Outstanding impact of Dalit women's network

The Deccan Development Society (DDS), a network comprising some of India's poorest and most marginalised women, was awarded the 2019 UNDP Equator Prize as "an outstanding example of a nature-based solution to climate change and sustainable development", that is building local capacity. DDS practices and teaches ecology-based agriculture for food security through small groups or 'Sanghams' working across 75 villages in India.

Stable digital currency to fund regeneration

A new blockchain-based currency called SEEDS, built by the decentralised app creator Hypha and co-owned by all who contribute, aims to reward and finance people and organisations "committed to creating a healthier and more equitable planet", and "nurture a globally regenerative culture".

Mexico's 'Water Culture' movement

Isla Urbana, an interdisciplinary group of designers, urbanists, engineers, anthropologists, educators and artists, aims to build a water-responsible culture in communities across Mexico by integrating education and community empowerment with the installation of rainwater harvesting (RWH) systems. The movement defines 'Water Culture' as "the state of being an active participant in the construction of a symbiotic relationship with nature and our water cycles."

New \$1bn 'natural capital' investment fund

Pollination group and HSBC have announced an investment fund focused on putting a value on natural resources. The fund will invest in regenerative agriculture, sustainable forestry, water management, blue carbon capture through aquatic ecosystems, nature-based bio fuels, and other nature based projects. HSBC and **Pollination group**, a climate change advisory and investment firm, are expected to launch the fund midway through 2021 and aim to raise \$1bn.

A truly regenerative business is one with the potential to be self-sustaining, whose business model inherently replenishes and reinvests in the underlying systems on which it relies.



⚡ IMPLICATIONS

How can this play out in practice?

Our response to COVID-19 is a case in point. There is growing recognition of the causal relationship between ecological destruction – particularly of forests – and the rise in species-jumping diseases. There could not be a clearer link between the health of the ecosystem and that of individuals. But our response to COVID-19 has been largely narrow and reactive, not holistic: identifying and treating symptoms, and trying to isolate ourselves from the disease. There has been relatively little focus on boosting overall individual and community wellbeing, improving diets, housing, transport, air quality, and so on – as well as protecting and enhancing ecosystems – despite the considerable evidence that doing so would not only increase our resistance to COVID-19 specifically, but also make our society as a whole healthier in every respect. One which is more able to either avoid, or cope with, future pandemics; more able to mitigate and adapt to climate change.

A wholly regenerative approach will produce many such ‘virtuous circles’ – a cascade of co-benefits. At present, no such thorough-going approach exists in practice, but there are possibilities emerging, and a role for everyone from business leaders to governments to bring them to life. The city of Amsterdam, for example, is exploring adopting **‘doughnut economics’** to help build a future with a decent quality of life for all within natural limits.

A regenerative business would recognise its interdependence on other people and organisations.

It would look to collaborate with others and influence and build the health of the critical systems on which it relies for its prosperity. There are signs that some companies at least are starting to embrace this thinking. Those identifying as B Corps, for example, are demonstrating the potential of putting a wider societal purpose into the core of their activities.

H&M and **IKEA**, meanwhile, are placing circular economy principles at the heart of their business models. Some investors, too, such as **Cornerstone Capital**, are moving away from a ‘minimise impact’ approach – which might, for example, focus on ruling out financing fossil fuels – towards recognising the need to fundamentally shift business models to positively contribute to our society.

These are all welcome first steps. But a truly regenerative business is one with the potential to be self-sustaining, whose business model inherently replenishes and reinvests in the underlying systems on which it relies. Such a business would see its role in a wider ecosystem, recognising that it is not a static entity but one that lives and evolves, and so would focus on building the underlying capacity of its employees and stakeholders.

As the recovery slowly takes hold, now is the time for all involved in business strategy to ask themselves: where can you identify different routes of value creation consistent with a regenerative approach? And what different business models might you explore to do so?

And a question for us all: how can regenerative approaches provide that critical ‘unlock’ to the multiple challenges of the decade ahead?



WHAT NEXT

EMERGING TRAJECTORIES THAT WILL SHAPE OUR FUTURE

The COVID-19 pandemic is not just disrupting daily life, but also the fundamental assumptions people hold and their way of thinking about the world: what we term their mindsets and their narratives.

This may actually be good news. We know from our work changing systems, that deep change only happens when narratives change. Narratives are what we use to make sense of the world and organise our societies. Organising in new regenerative and just ways will require new narratives, based on assumptions and mindsets that prioritise collaboration, collective human wellbeing and planetary health. But at the same time we must also recognise that mindsets based on fear and competition will lead in other directions, and be prepared to work with this reality.

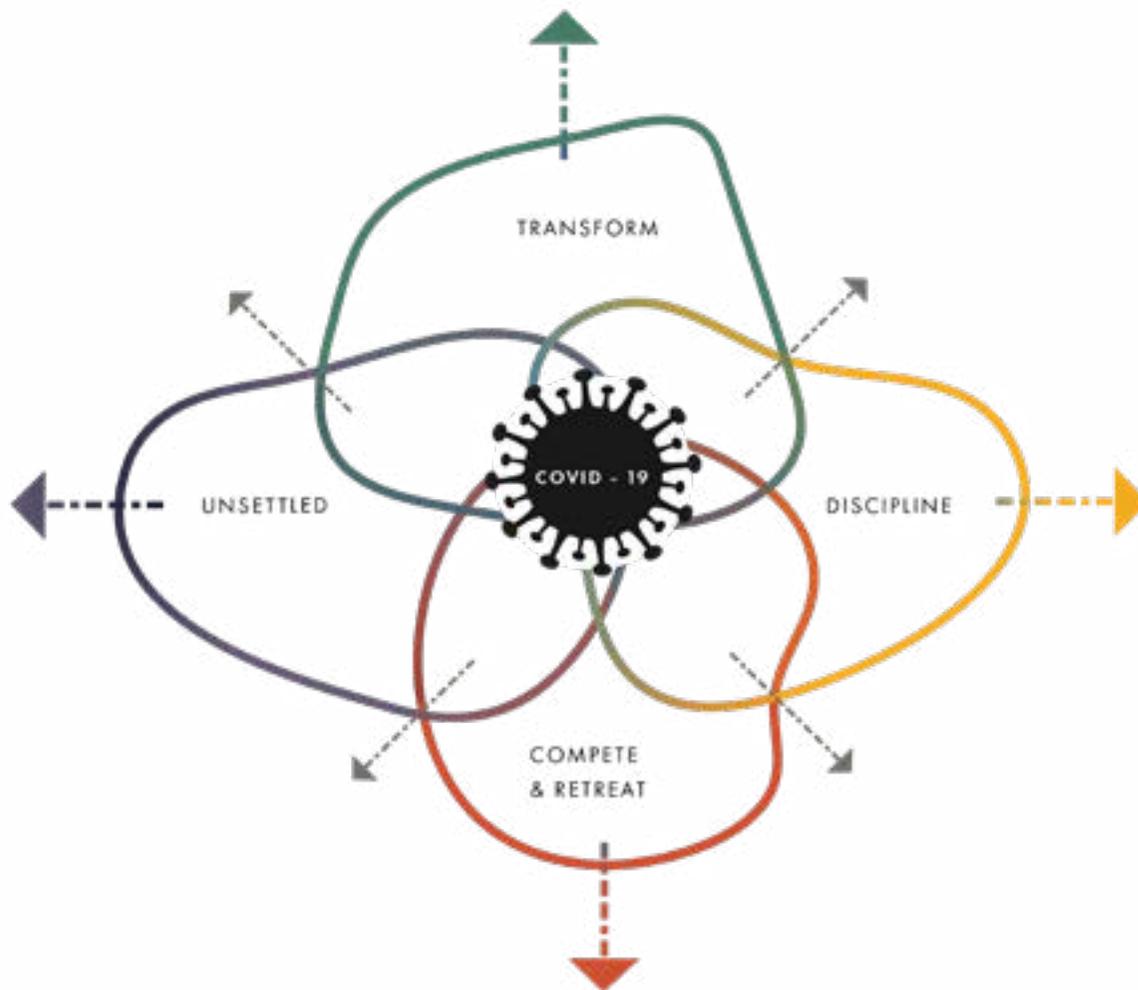
In other words, the silver lining of this very difficult time is an opportunity to enact deeply needed change for sustainability. However, working strategically towards such change is difficult when the current range and depth of uncertainties are so great. Forecasts are of little use when assumptions are shifting. But by looking at alternative narratives that are emerging, we can start to understand trajectories that lead from here to alternative futures.

Forum for the Future has begun to plot these potential trajectories based on desktop research, interviews and workshops with a wide range of leaders across business, philanthropic and not-for-profit organisations, and analysis of the latest signals of change.

The trajectories are a guide to understanding what may happen next, to detecting early signs of the sort of shift we might see, and anticipating some of the consequences. They are a tool to help changemakers work with this moment of deep discontinuity to deliver transformational change for sustainability.

While grounded in the present moment, each trajectory points to a very different long-term destination. However, they are not mutually exclusive, and in fact, all are currently active, overlapping, and all are likely to be 'in play' for some time. There are features within each trajectory that characterise the different responses we have seen to the COVID-19 crisis. From the perspective of sustainability, each trajectory has 'light' that can be worked with, and 'dark' that will need to be mitigated.

The key question is which trajectory will dominate over the next few years – which will most strongly contribute to the assumptions that frame the collective actions of this critical decade?



HOW TO USE THE TRAJECTORIES

At Forum for the Future we use futures work to help organisations and entire sectors grapple with uncertainty and change. By revealing the complex interplay of dynamic trends around us, and identifying risks and opportunities associated with this interplay, we can understand where and how to act now for long-term resilience and success.

The COVID-19 trajectories are a living and flexible systemic futures tool with many possible uses, including:

1. Tracking and making sense of the changes happening around us

By tracking signals of change and dominant narratives as they evolve, the trajectories can provide a framework for dealing with the 'overwhelm'; with the complex and often contradictory nature of what is happening in this moment.

See more at thefuturescentre.org.

2. Informing your strategy

The trajectories can be used to build a nuanced understanding of key challenges your organisation may need to traverse in the 2020s and how to respond to them. They are useful for testing an existing strategy, or developing a new one, making better decisions to understand the outcome you want, and exploring your organisation's role in a changing system.

3. Creating the narratives and the framing to drive collective action

No matter which version of the future we find ourselves in, the trajectories can support alignment with partners, raise collective ambitions, and help to build collaborations for transformation.

Find out more

TRAJECTORY 1

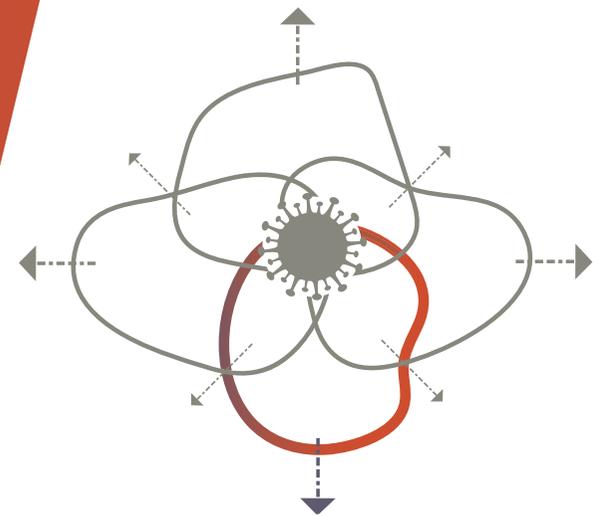
COMPETE & RETREAT

UNDERLYING MINDSET

“There is not enough to share. We must retreat to protect our own kind. Our survival and prosperity comes ahead of the survival and prosperity of others.”

IN BRIEF

This is characterised by the strengthening of existing nationalist dynamics, pointing towards the collapse of what's left of globalisation and international collaboration, and the emergence of fragmented regionalism.



SIGNS OF THE EMERGENCE OF THIS TRAJECTORY

Since the start of the pandemic, signs we have seen include:

- **mask piracy**
- the **closing of international borders**
- **vaccine protectionism**
- the **barricading of some local communities** to protect themselves
- **rich nations outspending developing nations** on materials to manage the pandemic
- the **strengthening of action at national state level**



WHAT MIGHT HAPPEN IF THIS TRAJECTORY DOMINATES?

We could see zero-sum dynamics coming into play from nationalist governments, as we have already seen with access to personal protective equipment (PPE) and medical resources, and increasing focus by nearly all countries on national health, national food and energy security.

At national level in many countries this might feel positive to many people – a sense of pulling together for the common good, a welcome focus on securing local economies, production and jobs, and the training of local people instead of relying on immigrant labour.

We might see more protectionism, supply chains shortening, and 'reshoring' increasing in the richer world, as business uses automation to bring production closer to the market. For many developing countries, this trajectory could be disastrous, with foreign aid dwindling just as their competitive advantage in terms of labour costs is eroded by automation.

There could be patchwork environmental gains, as a focus on local energy resilience could boost renewables and electricity storage, and a drive for self-sufficiency could speed the growth of circular economies. But there would likely be more downsides, with many countries and communities under pressure to exploit natural resources for short-term gain, without regard to longer term impacts.

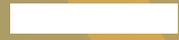
International cooperation to tackle climate change and other global challenges would erode heavily and perhaps fall away almost entirely, causing the collapse of multilateralism and the failure of global governance structures. In its place we might see the emergence of fragmented regionalism around rival power centres.

We might see more protectionism, supply chains shortening, and 'reshoring' increasing in the richer world, as business uses automation to bring production closer to the market.



WATCH: Bringing Compete & Retreat to life





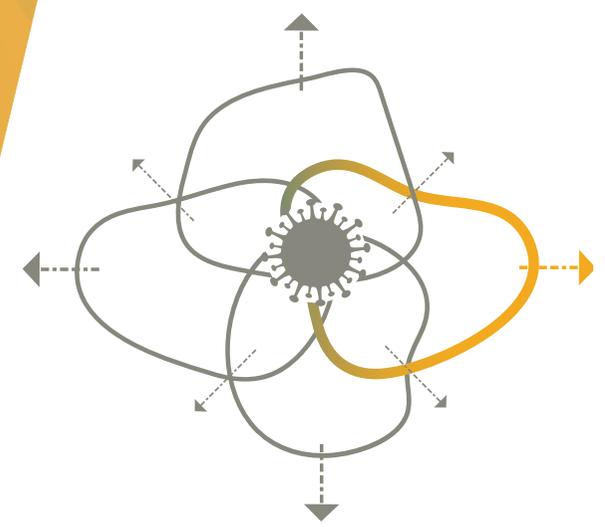
TRAJECTORY 2 DISCIPLINE

UNDERLYING MINDSET

“Greater control is required to maintain public health, safety and security, and to keep growth and global interconnection going as ‘normal’. We are prepared to relinquish privacy concerns for this.”

IN BRIEF

This is characterised by the ramped up use of technology for automation, remote connection, surveillance and control in an attempt to manage complex problems, to return to some form of globalisation and to keep the current model of growth going.



SIGNS OF THE EMERGENCE OF THIS TRAJECTORY

Since the start of the pandemic, signs we have seen include:

- acceleration of automation
- proliferating test and trace systems
- the growth in value of tech companies
- a shift to remote working
- data-driven transformation of supply chain management

WHAT MIGHT HAPPEN IF THIS TRAJECTORY DOMINATES?

We could see the normalisation and acceptance of mass surveillance and citizen tracking systems, in the service of returning to 'normal', which remain in place after the pandemic subsides.

In some countries we could see the adoption of versions of the Chinese 'social credit system' to influence and track public behaviour.

In industrialised countries we could see accelerating automation and ramped up use of technology across many sectors, to facilitate 'no touch' interactions and to enable economies to keep going through varying restriction levels. Remote working and education could become normalised across many countries, causing a deep reconfiguration of living patterns, cities and transport networks and the end of business travel, with all these patterns and norms persisting following the pandemic.

While many positives could come from such a reconfiguration, there is also a risk on this trajectory of increasing existing trends around automatisation and less human contact, with implications for loneliness, mental health and loss of community feeling.

Power dynamics would probably become increasingly centralised on this trajectory, with governments and big tech companies becoming closely aligned and mutually dependent. If automation is poorly managed and leads to high unemployment, public feelings of disenfranchisement could increase and lead to very difficult political dynamics.

We might also see an increase in deployment of surveillance and remote technology for sustainability gains. In addition to remote working, we could see things like increasing use of predictive AI to manage resource supply chains efficiently, to increase agricultural yields, and to manage decentralised energy loads from renewables more effectively. We could see greatly expanded use of data all the way down the supply chain to avoid human rights abuses and increase transparency. We could also see increasing use of global sensor networks and high resolution satellites to track pollution, and crack down on illegal fishing and logging.

Ramped up use of technology for automation, remote connection, surveillance and control in an attempt to manage complex problems, to return to some form of globalisation and to keep the current model of growth going.



WATCH: Bringing Discipline to life



TRAJECTORY 3

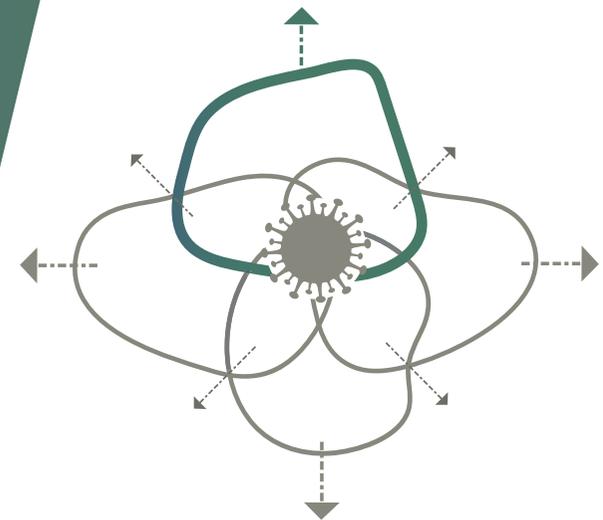
TRANSFORM

UNDERLYING MINDSET

“Planetary health and human wellbeing come first, and are interconnected. Deep change to reset the system is possible, desirable and happening. We can’t go back to ‘before.’”

IN BRIEF

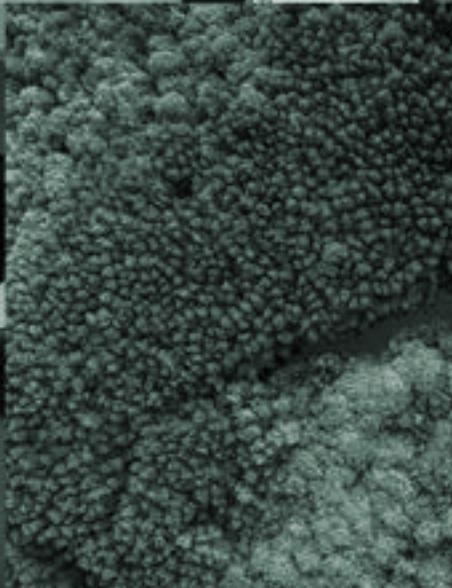
This is characterised by the harnessing of the recovery from the pandemic as a ‘reset’ to accelerate a fair and equitable zero-carbon transition and enable a shift towards approaches like stakeholder capitalism, ‘doughnut economics’ and wellbeing budgeting. New business models emerge based on resilience and regenerative thinking.



SIGNS OF THE EMERGENCE OF THIS TRAJECTORY

Since the start of the pandemic, signs we have seen include:

- Amsterdam's plan to use doughnut economics to recover
- major cities reconfiguring to promote cycling over car use
- responses to Black Lives Matter by major institutions
- the accelerating of the B-Corps movement
- the adoption of regenerative agriculture practices by corporations such as Walmart
- a surge in green bonds for the recovery



WHAT MIGHT HAPPEN IF THIS TRAJECTORY DOMINATES?

The deep levels of dysfunction, structural inequality and gross inequity revealed globally, regionally and locally by the pandemic could lead to sustained attempts to address them, and growing recognition of the need for systemic action.

For example the ongoing resurgence of the Black Lives Matter movement can be seen as part of a wider recognition that the time has come to recognise and address structural faultlines.

We could also see the harnessing of the recovery responses and trillion dollar bailouts to make society more resilient and to accelerate zero-carbon and just transitions.

Initial impetus from grassroots and city initiatives to use the opportunity to transform could be complemented and bolstered by pioneer businesses visibly acting and responding to a deep sense of purpose. Calls to 'build back better' could focus sustained attention and effort on expanding the business models, incentives, policies and reforms that are needed to put the economy at the service of wellbeing and the planet, not vice versa. We could see increasing acceptance of the critical role of natural systems, such as forests, in everything from reducing the risks of pandemics to sequestering carbon – and this being properly reflected in shifts in investment.

As economies seek to recover from the pandemic, norms and narratives could begin to shift towards

ideas like: For a company that serves society, *profit is the means, not the goal in itself. Wellbeing is a measure of success, and so is resilience. Inequality is not a by-product of the system but a metric of failure.* Deep economic reform could begin to happen.

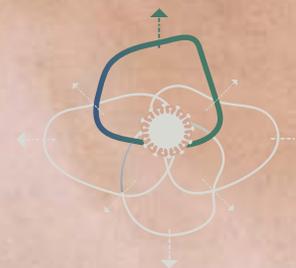
The ongoing difficulties around political polarisation and combating disinformation would not go away on this trajectory and could actually intensify considerably. There is a risk of 'culture war' narratives strengthening. We could begin to see attempts to address this by the adoption of participatory governance models, as learning spreads from the experience of **Taiwan**. If successful this could lead in the longer term to a more resilient politics at both national and international level; one that is better able to respond to shocks and global challenges.

Regenerative models and thinking could spread across the agricultural sector and also begin to manifest in other areas and sectors – we could start seeing an increase in regenerative thinking that integrates social wellbeing in business models, the development of technology, urban planning and local and national government policies.

Transform sees a lot of decentralised, distributed responses from communities alongside pioneering businesses visibly acting on and responding to a deep sense of purpose.



WATCH: Bringing Transform to life



TRAJECTORY 4

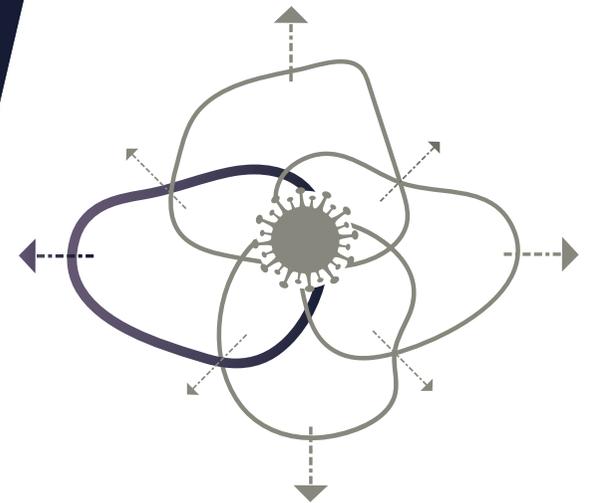
UNSETTLED

UNDERLYING MINDSET

"There might not ever be a 'new normal', the world is now strange and volatile beyond all previous human experience. Previous ways of thinking are not helpful now. Radical resilience, adaptability and opportunism jostle with fatalism and anxiety."

IN BRIEF

This is characterised by continuous discontinuity from cascading events and crises of all kinds- climate and ecological, political, social and technological- and the need to adjust to a difficult and strange reality of 'no new normal'.



SIGNS OF THE EMERGENCE OF THIS TRAJECTORY

Since the start of the pandemic, signs we have seen include:

- unprecedented Australian fires
- the pandemic itself
- the oil price going negative
- possibility of oil demand peaking this year
- spiralling proliferation of conspiracy theories
- US firestorms in the wake of summer snow
- 'Biblical' locust plagues in several countries
- the Beirut explosion
- a third of Bangladesh flooded
- Antarctic methane leaks 70 years early



WHAT MIGHT HAPPEN IF THIS TRAJECTORY DOMINATES?

The worldview underlying this trajectory is less defined than the others and currently manifests more as a sense of continuous shock and unreality as events continue to pile up one after the other that seemed unthinkable, one-in-a-century, or even fantastical a short while ago.

While the pandemic itself is a major current part of this emerging trajectory in terms of the scale of disruption and open-ended uncertainty that it has brought, the intersection with ongoing climate and ecological breakdown, political instability, polarising social dynamics, economic disruption, and the disorienting speed of technological change is producing the possibility of a longer term global path that never actually stabilises into a 'normal' in terms that humans expect or have previously experienced.

We could see cascading, colliding and compounding events with unexpected and strange consequences that continually wrongfoot human institutions designed for the 20th Century – which means large swathes of the world. Tipping points with non-linear effects could occur. Not all would necessarily be negative – there is also the possibility of social, technological or even commercial tipping points that could accelerate positive change.

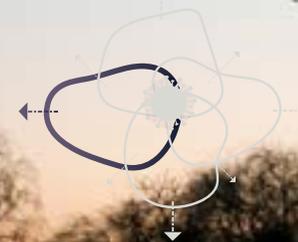
The combined effects of these events could derail attempts to establish a stable or inflexible 'new normal', and lead to the rise of new groupings

better attuned to this dynamic. The capacity to adjust to 'no new normal' would need to be developed and societies would probably need to cope with widespread anxiety and fatalism. Constructive approaches could potentially develop much stronger focus on resilience, adaptability and intuitive opportunism.

Continuous discontinuity from cascading events and crises of all kinds– climate and ecological, political, social and technological– and the need to adjust to a difficult and strange reality of 'no new normal'.



WATCH: Bringing Unsettled to life



DESIGNING FOR TRANSFORMATION

At any point in the next six to 18 months, any one of the four trajectories could be more dominant, and could potentially close down certain pathways to sustainability.

By understanding these different possible versions of our future, and the mindsets that might dominate, we can begin to design from realities that might be less sympathetic to sustainability, towards ones that are more aligned with the ambitions of the SDGs.

Of the four trajectories, Forum for the Future strongly believes that the **Transform** trajectory must be the dominant one, and is essential if we are to create a world that is truly regenerative, and realises the just transition towards a net-zero global economy which is ultimately in everyone's interest.

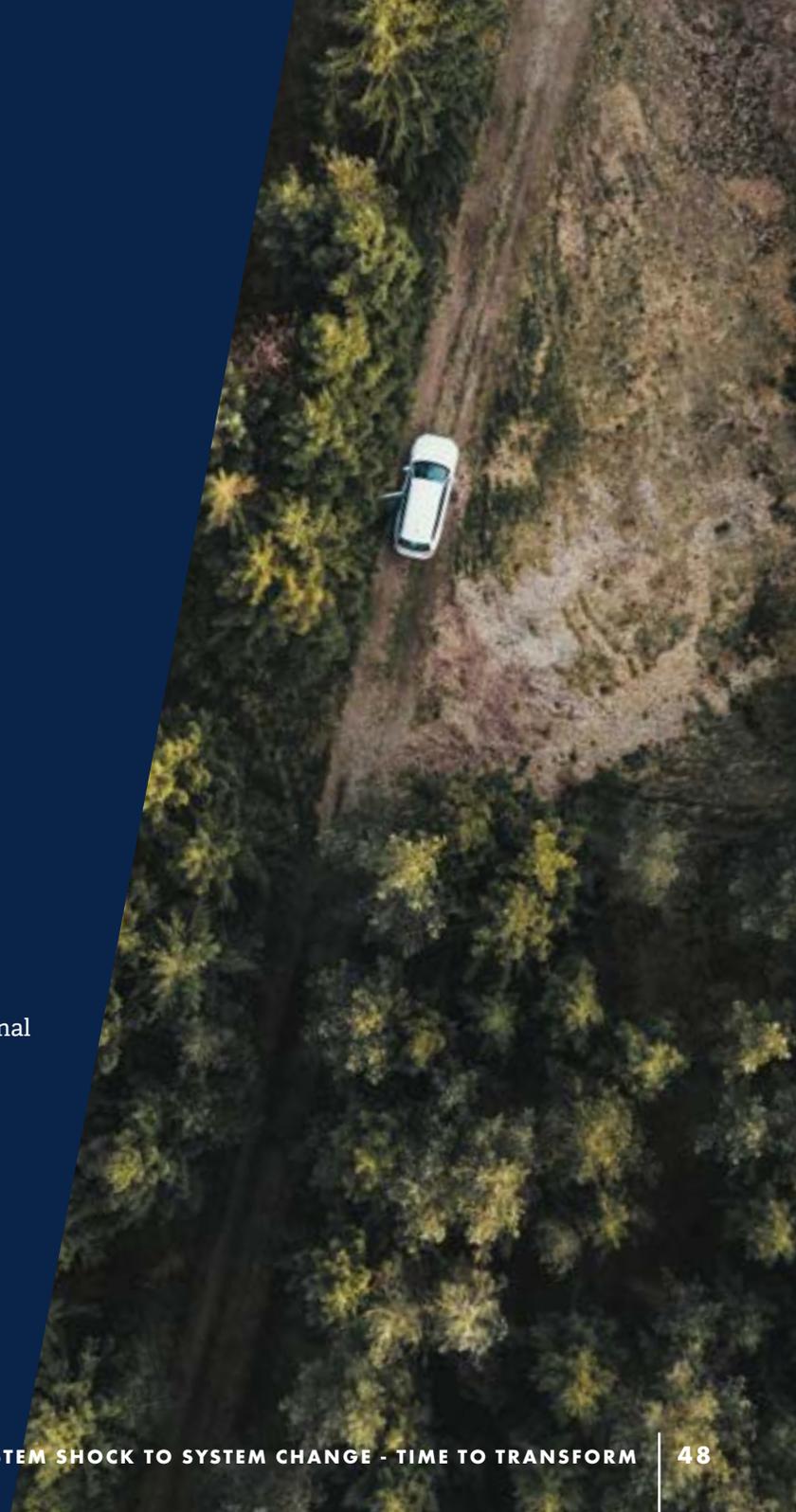
By contrast, with only piecemeal action on sustainability, **Compete and Retreat** and **Discipline** threaten to lead us down a road to climate chaos and 'Hothouse Earth', with all the disastrous social and economic consequences that entails. In many ways, the **Unsettled** mindset and trajectory include some of the most interesting and concerning reflections with a very high number of signals and trends relating to an Unsettled present and future reality, but a far lower number relating to the recognition of this possibility and the development of a mindset to

consciously deal with this constructively. This suggests that there is a great deal of work to do to make institutions and countries properly resilient for the potential risks of this decade.

At the same time, it is important to show understanding and empathy with the mindsets underpinning all the trajectories, as they are all present in our day to day interactions. Whatever mindset you occupy, don't assume others are in the same space. The trajectories show just how far apart citizens and countries may be, and the need to understand the narratives of others.

Some mindsets – for example Discipline – may be important and very effective to adopt in the short-term in order to manage the pandemic response. But it is important that we ensure our long-term strategy remains firmly framed by a transformational mindset. And we need to be aware that systemic shocks, with all their ability to derail the best laid plans, will continue to be an inevitable feature of the years – indeed, decades – to come.

Meanwhile, we have a window in which the debate over narratives and mindsets is still very much alive. That window may not remain open for long.





TIME TO TRANSFORM: CONCLUSION

We know that the decisions we make in the next six to 18 months will determine the future of our society, our economy, and the planet.

At Forum for the Future, we firmly believe that the future is not something that happens to us, but is something that we actively create through every action we take.

And along with our many partners across business, civil society and government, we believe that the **Transform** trajectory needs to become the dominant version of our future if we are to deliver the systemic change needed to solve our inequality, climate, biodiversity and public health challenges.

If we are to achieve that change, we need to change our views of how the world works, and to redefine the goals of the systems we operate within.

For each of us, there are questions we need to hold and pathways to transformative action we can help society to choose and progress along.

PATHWAYS TO TRANSFORMATIVE ACTION

ROUTES TO TRANSFORMATIVE ACTION

QUESTIONS TO HOLD

ACTIONS TO TAKE

What does just and regenerative tech look like? What social contract would support that?

How do we stop living as if we are separate from nature? How do we ensure human and planetary health are seen as intertwined?

How can we redefine what we mean by value? How do we shift the goals of our economic system?

How can we ensure equality is at the heart of the forthcoming transitions?

How can we enhance the capacity of living systems to regenerate, adapt and flourish?

Rethink how technology is used and why. Redefine who knows, who decides and who sets the rules of tech and transitions

Advocate for the Transform narrative with ambition and urgency commensurate with the current challenge and opportunity

Contribute to deep economic reform by redefining how we value thriving people and ecosystems

Tackle inequality and actively ensure voices of marginalised communities are central to all transitions

Map out what it means to embed a regenerative vision that goes beyond do-no-harm sustainability

Be future focused

Contribute to new narratives

Invest in change

Consider your power

Build capacity and resilience

ENABLING APPROACHES

PLAYING AN ACTIVE ROLE IN CREATING TRANSFORMATION

There are huge questions to be tackled. And the answers to them may at first sight seem out of reach. But the reality is that organisations and individuals are answering these questions every day in positive and innovative ways – we have provided many examples of them in this report.

Each one of us, individually, and through our organisations and initiatives, has a role to play in ensuring that we harness this moment of radical change to transform the world around us for the better.

There are many actions we can take now, and shifts in approach we can adopt. We have provided just a few of these here, organised by sector.

BUSINESS

- Ensure the organisation has an **inspiring and credible change-making purpose** beyond profit maximisation, and the governance to deliver on this, including a diverse board of directors wide awake to the scale of the challenges.
- **Drive rapid, disruptive innovation at scale;** set ambitious 2030 sustainability targets that currently seem unachievable, and galvanise the entire sector behind the groundbreaking solutions required to transform the markets you operate in for the better.
- **Commit to greater transparency** across value chains by publicly disclosing sustainability data that reflects organisational values and allows stakeholders to hold you accountable for your performance.
- End procurement practices that only focus on extracting maximum value at minimum cost and **shift to new practices and market models** that focus on full transparency, sharing value to build resilience and regeneration all along your supply chain.
- Lead the way with **R&D, innovation and marketing investments** to make it easy, affordable and aspirational for citizens to adopt healthier and more sustainable lifestyles.
- **Advocate with governments** for bolder action on social exclusion, income inequality, climate breakdown and the biodiversity crisis; encourage higher standards of regulation to raise standards and ensure a level playing field.

INVESTORS

- **Set mission as delivering value in the broadest sense** – long-term societal value and natural capital – not just short-term financial returns, and drive investment into an economic system which has reset its goals to enable a regenerative future.
- Exert active ownership strategies to **influence investees** to reconsider and shift their practices. Proactively invest in those businesses that are driving long-term sustainability.
- **Use a carbon price** in all financial analysis. Rule out anything that does not work with carbon priced at the level required for delivering the Paris Agreement.
- **Employ innovative instruments** that finance the costs of transitioning to more sustainable production, such as green bonds, and mechanisms to finance conversion of conventional agriculture to regenerative agriculture such as monetisation of future cost-savings.
- Consider not just the immediate impact of an investment, in terms of products or jobs, but **how a portfolio of investments can drive wider systemic change** by channelling capital into new areas, sparking innovation, building upstream and downstream businesses, and influencing other capital flows.
- **Broaden and deepen analysis of ESG risk**, to ensure risks of climate change and inequality are fully considered through a fully incorporated approach.

GOVERNMENT

- **Align post-COVID-19 stimulus spending with 'green new deal' principles**, and ensure it rewards the industries and organisations that are part of a 1.5°C future.
- **Ensure all spending decisions have sustainability criteria baked in**, and all public-private partnerships have explicit goals to deliver sustainable development.
- **Develop plans for a 'just transition'** which drives greater equality, putting new opportunities and decision-making firmly in the hands of local people, and particularly those workers and communities who would otherwise suffer as the carbon bubble bursts.
- **Explore new ways of defining economic success** that are aligned with a regenerative future and fully capture the value of natural capital, shifting away from GDP as a defining metric of economic success.
- **Embrace truly participatory, multi-stakeholder approaches to democracy** and civic engagement, including engaging citizens' groups and traditionally marginalised communities in meaningful ways to drive policy solutions.
- Encourage municipal and regional authorities to **explore a 'doughnut economics'** approach to planning – delivering a decent quality of life for all and staying within ecological limits.
- **Explore adoption of new social inclusion and protection models**, including advanced forms of UBI, in the face of potential systemic levels of unemployment.

CIVIL SOCIETY ORGANISATIONS

- **Collaborate deeper and better** across sectors and within your sector; shift from a mindset of competition for scarce resources to one of collaboration towards an ecosystem approach.
- **Act with ambition and urgency** and take risks to create the change that will be needed at pace and scale - if not this sector then which? If not now, then when?
- **Contribute to positive new narratives** that recognise the interconnections between human needs and planetary health, and demonstrate the possible.
- **Ensure organisational strategy and theory of change recognises and accounts for interconnections**: if environmentally focused, ensure what you are calling for is socially just; if focused on socio-economic change, ensure it is compatible with a healthy planet.
- **Test new models of working and organising for change**, including shared and distributed models of decision making, and model the values the organisation upholds, ensuring equity and diversity are built into governance structures, hiring practices and work culture.

PHILANTHROPY

- **Develop participatory approaches to grantmaking** that support joint decision making and engage those closest to the challenges in informing the solutions.
- **Support a just transition** by utilising often risk-tolerant patient capital to de-risk the investment pathways of others.
- **Look beyond quantifiable outcomes** to invest more broadly in the capacity of your grantees and the broader ecosystem to deliver change with longer time horizons.
- **Pool your capital with other funders**, and across different types of investment, to deliver change at pace and scale, while also sharing data and learnings to create additional impact and avoid reinventing the wheel.
- Seek out ways to **break down silos**, engaging constructively with business, government and organisations interested in other thematic issues to build solutions together.

ACTING TOGETHER TO DRIVE A REGENERATIVE FUTURE

The Dynamics and trajectories we have identified in this report are complex, interconnected and shifting all the time, just as the future continues to emerge around us. And while there are many actions we can all take today toward ensuring that the Transform trajectory emerges, there is no clearly prescribed route to change.

There are, however, a number of **key enabling approaches** that will support our ability to navigate change and which will be critical to creating the future we want.

- **Be future focused:** Understand that multiple futures are always open to us, that the signs of possible futures are all around us, and that we all play an active role in creating that future.
- **Contribute to new narratives:** Recognise that change will require shifting mindsets and influencing deeply held belief systems and values. Play a role in crafting and supporting the narratives that will underpin a new future.
- **Invest in change:** Ensure that money, time, attention and information are directed to where they are needed most to drive and enable transformative action.
- **Consider your power:** Understand where you sit in the system, explore how you can use your power to create change, and how you

might shift the balance of power to support greater equity.

- **Build capacity and resilience to deal with uncertainty:** Prioritise capacity building and nurturing personal resilience in how we live, work, govern and operate – thereby strengthening our ability to navigate future shocks and uncertainty.

This current moment of disruption has proven our ability to adapt and change, and it has presented us with an unprecedented opportunity to reimagine our future. All organisations, all sectors and each one of us, have a key role to play in ensuring we grasp this opportunity.

How will you be part of creating a path to transformation?

To help contribute to our understanding of the future, please join our community of those tracking and making sense of change as it unfolds around us.
thefuturescentre.org



APPENDIX: OUR APPROACH

This report draws on both futures and systems change methodologies. In addition to trends research and horizon scanning, we interviewed a range of experts and held workshops across sectors and industries to gain insight into key systemic dynamics. Our horizon scanning was informed by signals of change generated through **the Futures Centre** – an open source platform that engages change makers around the world in tracking change as it happens and making sense of what we are seeing.

We were particularly interested in identifying potential shocks, tipping points, feedbacks, and thresholds in both natural and manmade systems, that would provide insights for the decade ahead around intervention points for systemic change.

These dynamics were mapped onto the **Multi-Level Perspective (MLP)** framework to explore how they might interact. **Multi-cause diagrams** of particular sub-dynamics also informed our thinking. We then discussed simplified versions of the MLP with various groups of stakeholders to get their perspectives and insights on findings.

Impact of COVID-19

The ongoing impact of COVID-19 across multiple systems is a perfect example of the type of shock we had been trying to anticipate. Our work shifted to accommodate this crisis and use the systemic insights already gained to help us understand

possible paths out of it. We tracked signals of change at multiple levels using the **'Systems Iceberg'** framework, and developed a trajectories framework to help individuals and organisations navigate through and out of this discontinuity in a strategic way.

Development of the Trajectories

The Trajectories framework we have developed is based on the 'Systems Iceberg' mentioned above and also draws from the Futures methodology known as Causal Layered Analysis. Both of these approaches point to the power of understanding the different levels at which change happens in human societies, and understanding how 'deeper' levels (such as values, assumptions, worldviews and implicit narratives) shape power dynamics, influence the underlying design and patterning of systems (such as resource flows), and frame and influence the parameters within which change occurs. We also drew on the Dator archetypes for social change narratives, modifying them to represent the present situation more accurately.

The trajectories we have developed are grounded in four basic foundational mindsets (or worldviews) that we have observed dominating in response to the shock of the current pandemic, and the social narratives that are currently arising from them. Each trajectory represents the unfolding change, actions and responses to events at all the different levels.

Our perspectives

While we have tried to include many different perspectives in our analysis, we recognise that this work is necessarily partial – not all trends or dynamics are represented as we have focused on those with the potential to shift the system over the next decade. We also acknowledge that this work is reflective of our own biases as an international sustainability organisation, founded in the UK, with offices in Singapore, Mumbai, London and New York.

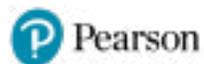
ACKNOWLEDGEMENTS

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